

REMARKS

This is in full and timely response to the above-identified Office Action. The above listing of the claims supersedes any previous listing. Favorable reexamination and reconsideration are respectfully requested in view of the preceding amendments and the following remarks.

Interview Summary

At a personal interview held between the Applicants' representative and Examiner Khiem D Nguyen, on July 10, 2008, the position was expressed that the claims were clear and that the cell region and the peripheral region were set forth in a manner which demanded that they be interpreted as being different and distinct from one another. It was then indicated that the Examiner's citation of structure on a peripheral portion of the "cell region" of Fang was inadequate to meet the claimed requirements. In other words, the structures which were being relied upon for rejection were not on the peripheral region *per se*, but on the edge of the cell region (as admitted by the Examiner on page 10 of the office action dated April 24, 2008). It was pointed out that if the Examiner's position were to be tenable then the claims should have been held to be indefinite in that the claims should indicate that the peripheral portion was in fact part of the cell region (assuming *arguendo* the Examiner's position to correct) and not a separate or distinct region. In that no issues were raised under § 112, then the claims, by calling for a cell region and a peripheral region, were clearly defining two distinct regions. In a nutshell, it was pointed out that the Examiner could not have his cake and eat it too.

The Examiner indicated an apparent appreciation of this. It was then offered to amend the claims to make it absolutely clear that the peripheral region was different and distinct from the cell region, if this would assist in advancing the prosecution. The Examiner indicated that he would take this up with his supervisor when a response was filed.

Claim Amendments/Status

In this response independent claims 7 and 13 are amended in a manner which further clarifies that the cell and peripheral regions are separate from one another.

Claim Rejections Under 35 U.S.C. § 102

The rejection of claims 7-10 and 14 under 35 U.S.C. § 102(b) as being anticipated by Fang (U.S. Patent 6,667,511), of record, is respectfully traversed.

In the claimed arrangement, the semiconductor substrate includes the peripheral region on which the CAM cell is formed and the cell region on which the memory cell is formed. It is well-known to a person skilled in the art that a select gate transistor is formed on the cell region, together with the memory cell. That is, the select gate transistor is formed on the cell region, not on the peripheral region. Since a tunnel oxide layer and a floating gate layer formed on the peripheral region are removed, a dielectric layer is used as a gate oxide layer of the CAM cell formed on the peripheral region.

The peripheral region of the present invention corresponds to the peripheral regions 314, 315 shown in Fig. 9i of Fang and disclosed as being a peripheral region at column 10, lines 53-60.

The cell region of the claimed invention corresponds to the core region 305 shown in Fig. 9i of Fang. Since a select gate transistor 348 is formed on the core region 305 together with the memory cell 346, the select gate transistor 348 cannot correspond to the CAM cell of the present invention. Peripheral transistors 342, 350 of Fang are formed on the peripheral region 314, 315. Therefore, the peripheral transistors 342, 350 of Fang may correspond to CAM cell of the present invention.

A gate oxide layer of the peripheral transistor 342, 350 is formed of an oxide layer, not of the dielectric layer including an oxide layer and a nitride layer. That is, the gate oxide layer of the peripheral transistor 342, 350 of Fang does not include the nitride layer. In other words, Fang does not teach or suggest that the nitride layer is formed on the peripheral region in order to use the nitride layer as the gate oxide layer.

Accordingly, Applicant submits that the claims 7 and 13, as amended, are distinguished over the cited reference. Therefore, claims 7 and 13 and the claims which depend directly or indirectly therefrom, are also seen to stand in condition for allowance.

Claim Rejections Under 35 U.S.C. § 103

The rejection of claims 13 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Fang (U.S. Patent 6,667,511) in view of Sheng et al (U.S. Patent 5,981,440), both of record, is respectfully traversed.

Fang does not teach or even suggest that the nitride layer is formed on the peripheral region in order to use the nitride layer as the gate oxide layer. Accordingly, Applicant believes that the claim 13 is patentable over the cited references, and the claims which depend from the base claim 13 are stand in condition for allowance.

Conclusion

It is respectfully submitted that the claims as they have been amended are allowable over the art which has been applied in this Office Action. Favorable reconsideration and allowance of this application are courteously solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,  
LOWE HAUPTMAN HAM & BERNER, LLP

/Yoon S Ham/  
Yoon S Ham  
Registration No. 45,307

Customer Number: 22429  
1700 Diagonal Road, Suite 300  
Alexandria, Virginia 22314  
(703) 684-1111  
(703) 518-5499 Facsimile  
Date: July 23, 2008